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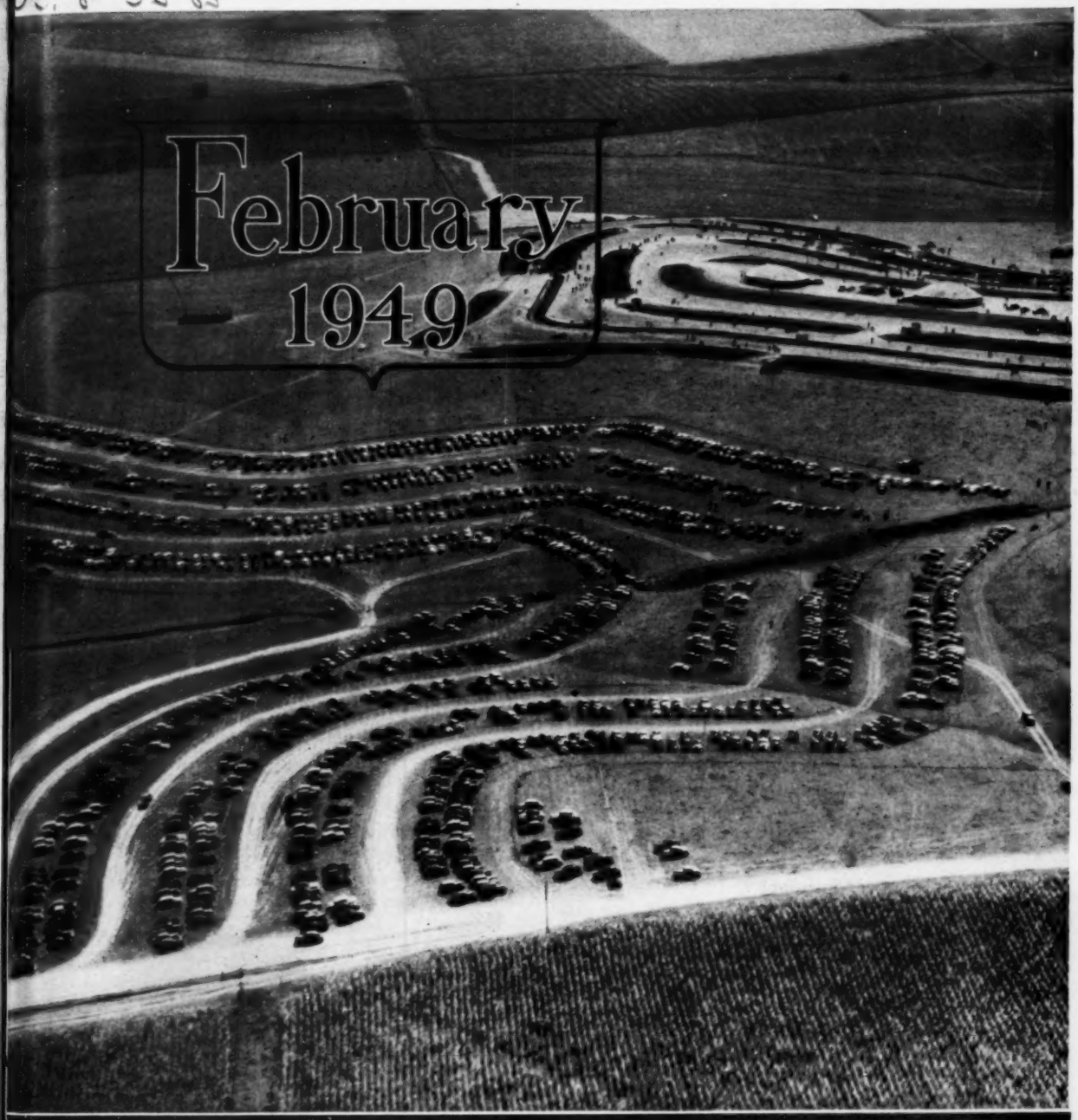

SOIL CONSERVATION

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WELLINGTON BRINK
Editor
Art Work by
W. HOWARD MARTIN

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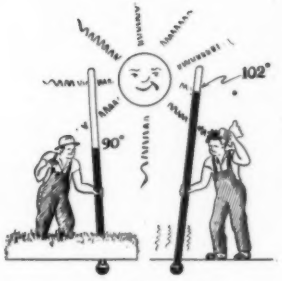

SOIL AND OLD SOL.—There's a certain amount of pleasure, now that winter is whipping down on us, to recall some of last summer's temperatures. Here's a mite of information involving August heat in the Texas Blackland.

Tom S. Giddens, soil scientist assigned to the Kaufman-Van Zandt Soil Conservation District down around Terrell, Tex., woke up one morning wondering about the effect of a good stand of King Ranch bluestem on soil temperature.

That afternoon he took out his thermometer and found that: The air temperature 4 inches above the ground was 95°; the soil temperature 1 inch beneath the surface where a good cover of King Ranch bluestem grew was 90°; and the soil temperature 1 inch beneath the surface where the soil was bare showed 102°.

Giddens concluded that good soil cover lets soil keep cooler. Cooler soil, naturally, loses its moisture through evaporation a lot slower than hot soil. Q. E. D.: A good mulch is a good thing if you are in the farming or ranching business.

THE COVER.—Even the cars follow the contour in this view of the main parking area during the National Plow Terrace Building Contest, held last fall in Shelby County, Iowa. The two shields are appropriate to a patriotic month in which fall the birthdays of Lincoln and Washington. The photograph is by Ray W. Jones, Mills County Soil Conservation District.

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Farm Game Program in Maryland

Streambank protection along the Pocomoke River, Md. Shrub lespedeza does excellent job on spoil bank. Lovegrass is effective on upper ditchbank but doesn't do so well lower down, below high water mark.

By CHESTER M. KERNS

After 3 years of development, Maryland has a farm game program that clicks because there is teamwork among farmers, the Maryland Game and Inland Fish Commission, the State Soil Conservation Committee, the soil conservation districts, and the Soil Conservation Service.

This program establishes wildlife refuges in woodlands and fields that are too steep or too eroded for agricultural use, but that can be made into good wildlife habitat through erosion control practices. It brings about the best use of the lands, and ties in the wildlife phase of each cooperating organization by recognizing vegetation as a common working tool.

Organized in late 1945, but not accepted by all cooperating groups until the following year, the program is now producing highly satisfactory results in 20 of the 22 Maryland soil conservation districts. By July 1, 1948, it had planned 250 wildlife refuges, of which 170 (2,050 acres) had been established. It had planted more than 24,000 trees, 174,000 seedling shrubs, and 7,700 pounds of seed for wildlife borders and food patches and for protection of spoil banks, drainage ditches, and stream banks.

Note.—The author is work unit conservationist, Soil Conservation Service, Westminster, Md.

These refuges hold "seed stocks" of game, birds, and animals from which the natural increase provides surpluses for hunting on surrounding farm land. With good management, little or no artificial stocking is required. This replaces the wasteful, costly, and otherwise less satisfactory practice of propagating game birds and animals in pens and releasing them in fields with small chance of survival.

The program was initiated by Ernest A. Vaughn, director of the Maryland Game and Inland Fish Commission. In 1945 he and Edward M. Davis, State conservationist for the Soil Conservation Service, and Frank Edminster, chief, biology division of Region 1, worked out the details with the Maryland State Soil Conservation Committee. Starting in Montgomery County, they laid the ground work through a series of memorandums of understanding between the Maryland Game and Inland Fish Commission, the Maryland State Soil Conservation Committee, and the individual soil conservation districts. The agreements authorize SCS planning technicians to include in each farm conservation plan, when agreeable to the owner, establishment of a 5- to 25-acre wildlife refuge.

The idea calls for upland refuges on farms that possess the general requirements for native wildlife, such as woodlands, grasslands, and cultivated fields. They are placed preferably along or close to streams of good water. Refuges primarily for fur-bearing animals, wild waterfowl, and fish are

L. to r.: M. Myers, temporary refuge caretaker; M. E. King, State wildlife project leader; Raymond Buchman, farm owner; C. M. Kerns, SCS technician.

installed where conditions are suitable. In some refuge areas there are provisions for building and managing lakes, marshes, and fish ponds. Unless a farmer prefers, refuge sites are not included on fields where other farm crops may be grown.

In Maryland approximately 93 percent of the land area is under private ownership. Sixty-six percent, or 4 million out of 7 million acres, is in farm land. Much of this agricultural area is intensively farmed, especially in the Piedmont and Coastal Plains. A growing scarcity of wildlife had resulted from the cleaning out of fence rows and odd areas to make way for cultivation and pasture, and from the drainage of small areas of questionable value to agriculture. These and other factors had caused a steady decline in small-game populations and other beneficial wildlife.

Improvement of wildlife habitat within a refuge area commonly takes the form of border, hedge and thicket plantings of shrubs, woods plantings of evergreen and hardwood trees, and border or strip seedings of cereals as food patches. Usually, combinations of these practices are used. Food and cover plantings are not confined to refuge areas. Similar plantings are made at other likely locations on the farm. The extent is governed by need for erosion control measures and the presence or absence of good natural conditions.

The extensive plantings are shrub lespedeza, multiflora rose, silky-cornel dogwood, tatarian honeysuckle, high-bush cranberry, and coralberry.

Maryland utilizes Pittman-Robertson Federal aid funds to finance part of this cooperative program with the districts. Federal regulations provide that such funds may be spent for a maximum of 75 percent of the total cost of projects, the State to contribute the remainder. Federal funds are authorized for four classes of work and each requires approval of the United States Fish and Wildlife Service: (1) land acquisition, (2) surveys and investigations, (3) habitat improvement and maintenance, and (4) coordination projects.

Participation by the Maryland Game and Inland Fish Commission in field work includes furnishing of refuge boundary-line wire, posts, and signs; some labor to establish and develop refuges; technical assistance in wildlife management; necessary quail stocking; game-warden patrol and law enforcement; traps for predator control; and some planting stock and seed for habitat improvement.

The soil conservation districts, through SCS technicians, develop complete conservation farm plans, including location of the refuge sites. The district supplies technical assistance for the field layout of all conservation practices specified in the farm plan and the bulk of the planting of stock and seed needed for wildlife habitat improvement and erosion control.

The farmer is asked to assist in establishment of the refuge; protect the area from fire, grazing, and hunting; permit hunting on the remainder of the farm; preserve hollow or dead den trees for wildlife; make brush piles following wood cuttings; plant wildlife food and cover species; cooperate in the enforcement of conservation laws; feed stocked wildlife until well established; and cooperate otherwise in the management of the refuge area.

Six regional wildlife field superintendents of the Maryland Game and Inland Fish Commission are cooperating with the district farm planners. The State is providing refuge caretakers in each county to assist farmers directly with labor and guidance. The State has the opportunity to grow a limited amount of planting stock and seed upon State-owned farms occupied by the refuge caretakers and used for storing equipment used in the program.

While the labor of establishing and improving the refuges has generally been furnished by the State Game and Inland Fish Commission and the farmer, some projects have been sponsored by Isaac Walton League chapters, 4–H clubs, FFA chapters, sportsmen's clubs, and public schools.

The educational program in Montgomery

(Continued on p. 152)

NEW WAY TO BUY *Machinery*

By C. W. GEE

Roger E. Sherman and Virgil Goff inspect district's new cultipacker seeder. Goff sowed alfalfa-brome in 20 acres of wheat last spring, harvested 45 bushels of wheat per acre and produced fine stand of alfalfa-brome.

SUPERVISORS of the Soil District of Worth County in western Missouri made 700 acres of grass legumes grow during 1948 where none grew before by using an ingenious financing plan which other soil conservation districts might well copy. Without using any district money whatever, they bought and paid for a combination cultipacker and seeder.

With Roger E. Sherman, work unit conservationist, the supervisors decided grass legumes were necessary to a better land-use program in their district. Good stands of alfalfa and bromegrass were difficult to obtain with standard farming equipment. Out of necessity a unique financing plan was born.

Sherman and the supervisors talked matters over and decided that many farmers who would hesitate to invest in the full purchase price of special seeding equipment would be perfectly willing to pay for seeding a good stand on an acreage basis.

Meeting at the district office in Grant City, the supervisors worked out a novel sort of contract. Under the terms of this agreement, 16 farmers of the Worth district put up $40 each for purchase of a cultipacker-seeder and a trailer to haul it.

In return for the $40, each farmer was entitled to use the cultipacker-seeder in seeding 40 acres of his land at $1 per acre. The supervisors agreed this was a reasonable rental.

The contract provided that when the 40 acres had been seeded, the $40 obligation to each individual farmer would be canceled and his share of the seeder revert to the soil district. The 16 farmers were given seeding priority over noncontributors. The district agreed to maintain the machine and transport it from farm to farm.

With the $640 advanced by the 16 farmers, the district supervisors bought the seeder for $482 and used the rest to purchase a trailer.

The seeder arrived April 4, 1948, and was put to work immediately. Because of damp weather, only 125 acres of grass legumes were seeded that spring. More favorable conditions prevailed in the fall and in a 2-month period starting August 6, district cooperators seeded 580 more acres of alfalfa-bromegrass. Good stands resulted.

Today the Worth district owns its own seeder which is still in good condition and will be rented to other district cooperators henceforth. Sherman predicts that within a few years Worth will lead in its acreage of grass legumes.

Supervisors are Ed Prest, chairman, C. A. Scott, William R. Penny, C. C. Foland, and Frank Miller.

NOTE.—Mr. Gee is an information specialist, Soil Conservation Service, Milwaukee, Wis.

ALL FORCES Pull together

By BRODIE PUGH

A MASTER soil conservation program carried out last fall on the John S. Welsh, Jr., farm near Shreveport showed what can be accomplished through cooperation. It demonstrated how easily the soil-erosion problem of this Nation could be whipped if all who are able to contribute to its solution were to get together like friendly neighbors —a trend much in evidence in recent years.

The big program of soil conservation on the Welsh farm was sponsored by the Shreveport Chamber of Commerce and the Upper West Red River, the Dorcheat, and the Upper Sabine Soil Conservation Districts. But in the weeks of planning and on the day of execution, the sponsors had generous help from numerous sources, all working closely together. Business firms furnished seed, lime, and fertilizer. Implement dealers furnished operators and automotive equipment worth half a million dollars. Paper and lumber mills supplied modern equipment and mechanics. Newspapers and radio stations publicized the event and interpreted its meaning for the benefit of their audiences of tens of thousands of persons. Soil Conservation Service technicians and employees of other agencies worked together on the technical phases. The general members of the chamber of commerce, especially the agricultural committees, gave a lot of time over a period of weeks. Soil conservation district supervisors and cooperators carried out important tasks. The United States Air Force, the National Guard, and the State government sent several officials with words of encouragement and the promise of official backing for soil conservation in all parts of Louisiana.

It would indeed take considerable space to enumerate all who worked on this project. The point to be emphasized is that, as was the case on this particular occasion, the conservation of soil and water resources is not a job for the Federal or the State government alone, or for the owners and operators of the farm land alone. Rather, it is a job for everyone, and a task that needs the help of everyone, if the erosion of the Nation's soil is to be stopped before it is too late and if American

(*Continued on p. 152*)

NOTE.—The author is district conservationist, Soil Conservation Service, Shreveport, La.

CANDID VIEWS OF BUSY DAY

1. Signboards on U. S. Highway 80 publicize demonstration. The farm will be open to public annually for 5 years for inspection of results.

2. John S. Welch, Jr., and Edgar W. Fullilove, chairman of chamber of commerce agricultural committee, check over contract between farmer and sponsors.

3. Welsh mans tractor, clears away slashings in preparation for big day.

4. John, pretty spouse Ferne, little daughter Mary Lou.

5. Welsh family takes turn around spacious, tree-shaded front yard.

6. Once wooded area, grown unproductive, was destined to be a pasture.

7. Same area as 6 with big machines at work. In one day this large field was disked, contoured, terraced, limed, fertilized, and planted to oats. Next spring it will be overseeded to lespedeza and Dallis grass.

8. Looking toward dam site, Welsh makes pre-construction home movies of area reserved for stock pond.

9. Heavy equipment gouging out pond.

10. J. T. Carr, mounted on mechanical tree planter, drops pine seedlings. Groups like these scattered over farm all day, watching application of various conservation measures.

11. Full view of tree-planting machine, Bill Flowers in driver's seat. The machine opens furrow and cuts slit into which man on the back inserts a seedling. The machine then closes soil around seedling.

12. Welsh chats with James E. McGinley (left), manager of chamber of commerce agriculture and industry department, and J. C. Dykes (right), assistant chief of Soil Conservation Service.

13. An adept MC was Albert J. Meek, general committee spark plug.

14. Tom P. Moore, supervisor of Upper West Red River Soil Conservation District, explains district's responsibility in coordinated program.

15. Congressman Overton Brooks tells what he saw at mouth of Mississippi River where dredging is done 24 hours a day to keep the channel open: "That mud comes from our farms."

16. Chatting in foreground are Homer H. Harris, Sr. (right), president of Red River Valley Association, and H. N. Smith, of the Soil Conservation Service.

17. State Commissioner of Agriculture W. E. Anderson expresses pride in achievements of districts.

18. W. T. Nolin, president of Louisiana Soil Conservation District Supervisors' Association, urges farmers to be alert for good ideas to carry back for use on own farms.

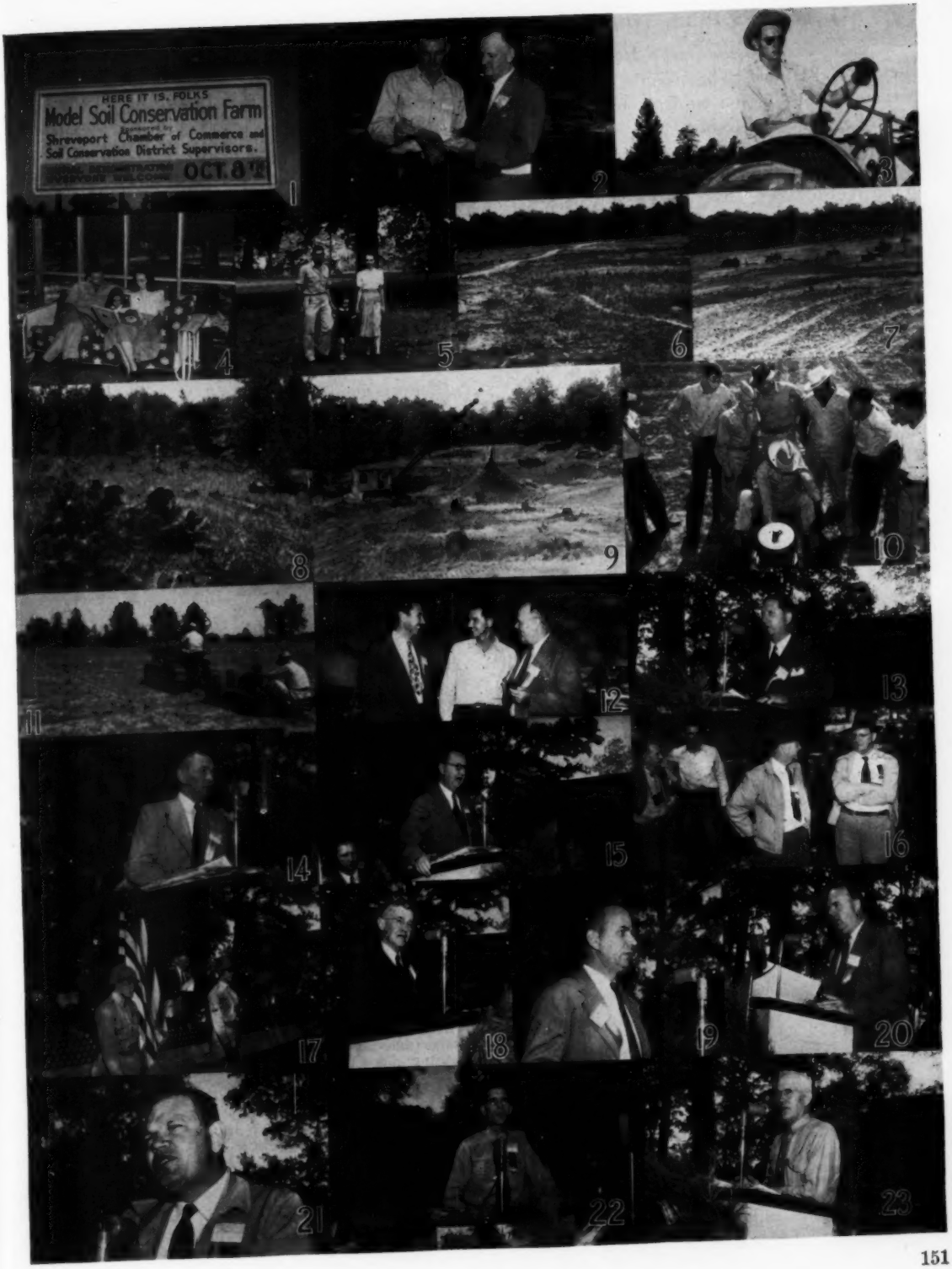
19. H. B. Martin, State conservationist, emphasizes vital stake which every citizen has in soil conservation.

20. J. C. Dyes, SCS assistant chief, expresses optimism in our "having sense enough to go ahead and finish this conservation job before we go hungry."

21. Lt. Gov. W. J. Dodd declares: "The people of Louisiana want soil conservation and the State leads in appropriations for this work."

22. J. H. Kitchens, Jr., assistant State forester, talks about part of forestry in conservation work.

23. J. P. Martin, Texas State Soil Conservation Board, congratulates neighbor State on its forward-looking soil conservation policy.


HERE IT IS, FOLKS
Model Soil Conservation Farm
Sponsored by
Shreveport Chamber of Commerce and
Soil Conservation District Supervisors.
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ALL FORCES PULL TOGETHER

(*Continued from p. 150*)

agricultural land is to be brought into maximum, permanent production in time to maintain the present standard of living.

An estimated 10,000 persons saw the various dovetailing measures of soil conservation applied to the Welsh farm. They heard soil conservation talks. Many other thousands got an insight into the work through radio broadcasts from the scene and through newspaper stories and pictures.

The idea, of course, was not simply to concentrate thought on the need for concerted action. The immediate task was to convert an eroded and depleted 320-acre piece of land into a productive conservation farm in 1 day. That achievement in itself showed what makes up a coordinated soil conservation program, how it is applied, and what it does for a farm. It was a dramatic way of calling attention to the entire conservation task—a task that embodies a large number of related practices. Of course, as was pointed out by J. C. Dykes, assistant chief of the Soil Conservation Service, an entire program of soil and water conservation cannot be applied in 1 day, as many practices are seasonal and must be installed at the proper time. For example, certain pasture crops cannot be planted until spring, and pine trees can be planted successfully only in January and February in this part of the country. But many major practices were applied in the 1 day; others were carried out to show how they are done, such as the planting of pine seedlings with a machine; all the others will be applied at the proper time, so that within a year young Welsh will have a farm on which an entire soil conservation program has been applied.

Nor, as Dykes also noted, can a conservation farmer be made in a day. But those of us who worked out the plan with Welsh agreed with Dykes when he added, "I believe that John Welsh will become a conservation farmer, a conservation farmer being one who farms the conservation way because it is part of him, because he understands that it is good for the land."

In helping to make a conservation farmer out of 31-year-old John S. Welsh, Jr., the sponsors of the master soil conservation program can also feel that they have been well repaid.

John S. Welsh, Jr., got a surprise when he bought 320 acres of eroded and depleted farm land at Flournoy, La., in January 1946. He discovered that the first individual owner of the land was his great-great-grandfather, Dr. Alfred Flournoy.

Owned originally by the United States Government, the land was eventually given to Louisiana for school purposes. On March 19, 1849, almost 100 years ago, Dr. Flournoy bought it from the State through the superintendent of schools for Caddo Parish. He held this particular parcel for 14 or 15 years and then sold it to five other persons, the abstract revealed.

Flournoy, 11 miles west of Shreveport, was named for the doctor and a brother, both of whom acquired large pieces of land when they came to northwest Louisiana from Tennessee in the 1830's.

FARM GAME PROGRAM

(*Continued from p. 148*)

County schools, under the leadership of Malcolm E. King, project leader of the farm game program, is outstanding. Here children in six schools have sponsored as many refuges and are doing all work in their establishment. Five county schools expect to construct fish ponds within wildlife areas. Pupils call refuges their "outdoor laboratories." Here they study soil, plants, and wildlife and are taught to record their findings, to make plans after study, and to meet for reports and discussion—an effective way to teach conservation to young Americans.

Maryland's cooperative program indicates the value of coordinating wildlife management with the conservation of our basic natural resource, the soil. It has already received acclaim in many parts of the country.

"POLICE POWER" ON THE LAND.—Recognition of the importance of land to the people and the Nation is becoming more general. Frequently it is remarked that owners and operators should be compelled to use land to preserve permanently its productive capacity. A discussion of this subject, insofar as it relates to the power of soil conservation districts, is contained in a pamphlet entitled "Land Use Regulation in Soil Conservation Districts." Copies may be obtained from the State, regional, or Washington offices of the Soil Conservation Service.

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Reconditioning WIND-BLOWN SANDY LANDS for GRAZING

By B. W. ALLRED

Side-oats grama seeded in spring of 1942 in 36-inch rows by Soil Conservation Service at Cheyenne, Okla., on land utilization project. Cultivated and mowed to control weeds. Seed combined in 1944 and each year since.

A FEW miles west of Cheyenne, Okla., is a stretch of sandhill country which, during the 1930's, suffered severe wind erosion. Dunes were forming and sand raced along the surface with every breeze.

The scene has changed. The bluestem grasses seeded by the Soil Conservation Service on land no longer suitable for cultivated crops are now producing beef at the rate of 30 to 50 pounds an acre.

During the 1930's, both corn and cotton seed were literally blown out of the ground before germination in many fields. Most of the plants that came up were soon shriveled in the dry wind or were shredded by wind-driven sand. Productive topsoil accumulated along fence rows, clumps of shinnery oak (mottes), and yucca. Many of the landowners petitioned the Federal Government to purchase the land so that they could move to areas of greater opportunity.

These requests were heeded, and the Cheyenne Land Utilization Project was established to demonstrate proper land use and reconditioning of wind-eroded areas. The Government bought 30,503 acres of this land within an area of 290,560 acres selected by the Government and proposed by local people for a demonstration project. The prices paid for the land averaged $7.50 an acre.

The men and women who pioneered in the area less than half a century ago found an abundance of grass throughout the locality. Sand bluestem, Indian grass, and big sand reed grew 4 to 8 feet tall. Little bluestem was nearly "stirrup-high," and side-oats gama, Canada wildrye, and Texas bluegrass were nearly as tall.

The settlers reasoned that since the sandy land grew grasses so well it should be good for farming. But the plow-up of the sandy grasslands was followed by tragedy. As soon as the binding grass fibers in the soil were dissipated through cultivation and decay, the soil fell loose and unstable with the first protracted drought. Blow holes dotted the fields, crops failed to germinate in the

Part of a 30-acre field seeded to weeping lovegrass in March 1945. The grass was planted in sorghum stubble. This field yielded 100 pounds of seed the year it was planted to lovegrass. The area provided grazing during the winter of 1945 and again in spring and part of summer following. Still in production.

NOTE.—The author is chief, regional range division, Soil Conservation Service, Fort Worth, Tex.

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desiccated soil. When the Government sought to purchase the worst of this "blow land," much of it already had been deserted by the owners.

Later, the Soil Conservation Service was given custody of the land—in 1940. Technicians of the agency quickly went to work on a program designed to reclaim or recondition the barren land sufficiently to produce grass. That was the only crop that could be grown with safety, it was felt. Fences and water holes were dug and ponds built to enable proper management of the animals on the old grasslands as well as the newly seeded areas. A. T. Elder of the Soil Conservation Service, in charge of the project, reports that 7,500 acres of former blow land has been successfully seeded to native and introduced grasses, mainly native bluestems. Today fat steers can be seen wading through stands of grass that strike them high on the side.

Fred Whittington, the Soil Conservation Service man in charge of the Cheyenne project from 1940 to 1947, recalls that he and his staff had to outwit the winds before they could establish satisfactory stands of grass. The sandy land was roughened to slow down wind erosion by the use of machines that turn clods to the surface. Under this condition, cover crops of sorghum were established. Once the cover crop matured, only the seed was harvested. Stalks were left as protection against the wind; seed was drilled in the spring. Most of the land was seeded to what was locally called "tall grass mixture," composed of side-oats grama, little bluestem, sand bluestem, Indian grass, and switchgrass. The mixture was drilled directly in the cane stubble at the rate of 12 pounds an acre. A small acreage was planted to native sand lovegrass, the seed being drilled at the rate of 1 pound an acre in rows 14 inches apart. Several hundred acres of weeping lovegrass, a native of Africa, have been planted to provide early season grazing for cattle. The seeding in this instance has been at the rate of 1 pound per acre where grass was drilled in 14-inch rows and three-fourths of a pound where the rows are spaced 40 inches apart. Grass seed produced on this project has helped to seed other project lands, as well as areas in the Upper Washita and other soil conservation districts. In the current period of seed scarcity the amount of seed grown is significant. Nearly 65,000 pounds have been produced since 1943. Last year the following amounts were harvested:

	Pounds
Little bluestem	4,400
Weeping lovegrass	9,000
Side-oats grama	3,000
Sand lovegrass	60
Tall grass mixture	7,275
Total	23,735

Some land already in native grass, plus the newly seeded areas, constituted the bulk of the 30,000 acres of Government-owned land. This grassland has been used by local landowners under grazing arrangement since 1943. At present, 96 land operators benefit from the grass. No one man runs animals on this grass year long. There were 8,191 unit months of grazing last year, or the equivalent of 682 head year long. Income from grazing has increased steadily since 1943. Then it was $3,707.03; in 1947 it was $10,718.15.

It is estimated that fees charged represent about 20 percent of the benefits gained by those using the range.

Twenty-five percent of the grass income is turned over to the county in which the land occurs, in lieu of taxes. When this land was removed from tax rolls it obviously had little effect on the county's tax income. Yearly reductions in savings in road maintenance and school and police costs have more than offset the annual tax loss.

A general field trial, suggested by local ranchmen so that they could observe the value of mowing shinnery oak and sand sagebrush, compared with the practice of leaving the brush, has been under way since 1944. Two local ranchmen have cooperated by furnishing yearling Hereford steers for the trials. Otto E. Boatright's steers were used from 1944 to 1945, and steers belonging to Dick Ivy were grazed in 1946 to 1948, inclusive.

Pastures are 40 acres in size. One is mowed each spring before the bluestem grasses and oak begin spring growth. The other pasture is not mowed. Eight steers graze the pastures from about the middle of May until the middle of September each year.

Pounds of steer gains from mowed and unmowed ranges, Cheyenne, Okla., L. U. Project, 1944–47

Date:	*Mowed range*	*Unmowed range*
September 1944	2,320	2,080
September 1945	2,180	1,680
September 1946	2,000	1,600
September 1947	1,810	1,370
Total pounds	8,310	6,730

Steers on mowed pasture turned off 1,580 pounds more beef in the 4 years than steers on unmowed pasture. Figuring beef at 20 cents per pound, the steers on the mowed area turned off $316 more in beef than the others. Mowing costs ran about $200 for the 4 years, leaving a $116 profit advantage for mowing during the 4-year period.

During 4 years, weeds on the mowed pasture increased 5 percent, grass 3 percent, and shrubs decreased 8 percent. Weeds on the unmowed pasture increased 13 percent, grasses decreased 22 percent, and shrubs increased 10 percent.

Range production continued to go down on the unmowed area through loss of both stand and vigor of good grasses. Productivity of mowed range went down more slowly. The decrease was due to a loss in vigor of the better grasses.

The bulk of steer gains is made by July 15. The 4-year average at Cheyenne shows that about 82 percent total weight on steers on the mowed pasture had been made by July 15, and over 90 percent of steer gains on the unmowed pasture had been made by July 15. Both feed shortage and grass maturity caused steers on the unmowed pasture to make poor gains in August and September.

Steers in the mowed pasture had made maximum use of available forage by August 12, 1947, and when kept there until September 12, 1947, they lost 30.25 pounds each. Steers on the unmowed pasture lost 32.3 pounds each during the same period.

Range management, grass seeding, and stock water developments in the Cheyenne L. U. Project have served as useful patterns for local people to copy. Including field days and individual visits, over 2,000 persons have carried away ideas that they could put to work on their lands.

Marshall Jordan, district conservationist for the Soil Conservation Service, reports that the Cheyenne area has been a proving ground for practices useful in local soil conservation districts. Some of the grass seed and much of the inspiration and interest that went into planting 10,000 acres of grass on neighboring soil conservation districts originated there.

The same can be said of renewed interest in range management by ranchmen operating near the project. Already many benefits are showing up in the form of increased grass and beef production. Following is an example of what one Cheyenne, Okla., ranchman is doing to improve his grass.

A. F. (Chink) Beaty is a cooperator with the Upper Washita Soil Conservation District who has taken most of the gamble from his ranching operation by keeping his cattle well supplied with native home-grown grass. Beaty has been giving his grass a change to get ahead of his cattle for several years. His grass stand has improved at least 25 percent since he took over the ranch a few years ago. His sideoats grama, little bluestem, and sand bluestem, excellent producing and high quality grasses, are mixing with the short grasses and crowding out a lot of worthless annual weeds. Grass has increased enough in one pasture to shut off, almost, the runoff which used to fill a dam. Several large gullies are being healed with mid and tall grasses. Beaty doesn't have to feed his cattle hay either. He wintered his herd without it last year.

"I keep my cow herd cut down so I can grow my hay on the range and let the cattle rustle for it when snow falls," he said. He feeds each cow about a pound of cake a day in winter to provide the protein and minerals that the dry grass lacks.

JOB WELL DONE.—To Raymond H. Davis, who recently resumed his position with the Soil Conservation Service as chief of the project plans division, has come, by command of General MacArthur, a commendation for meritorious civilian service in Japan.

The citation is signed by Maj. Gen. Paul J. Mueller of the General Staff Corps, Chief of Staff. It reads:

"For meritorious service to the occupation of Japan as chief, agriculture division, natural resources section, general headquarters, Supreme Commander for the Allied Powers, from 18 November 1946 to 18 June 1948. Mr. Davis displayed marked professional skill and unusual ability in directing the democratization of agricultural activities and the maximization of food production. Through his competency, resourcefulness, and unremitting devotion to duty, Mr. Davis made an eminent contribution to the aims of the occupation."

ARGENTINA CARRIES ON.—From Buenos Aires comes a letter from Mrs. John F. Manning, California Conservation Chairman for Garden Clubs of Santa Barbara, to Dr. Bennett: "I know it would have done your heart good if you had been at the office of the Soil Conservation headquarters here for Argentina. Your work is certainly bearing fruit down here. It was pleasing to see pictures of U. S. A. soil conservation methods hanging on the walls in both the offices of Soil Conservation and Forestry Service when I visited them yesterday. I talked to the men who were in the States in 1943 to study our work—they have done good work for the 2 years they have been organized. I thought it would be interesting to you to know that your department had been so much help to Argentina—so this note. The Director of Forestry Service here, Sr. Lucas a Tortorelli, has written a splendid book on the service and he was so kind in giving me a copy. (I have been studying Spanish for years and can read it, but I can't understand the Argentinos.) The Soil Conservation Service gave me a copy of one of your booklets that they had printed in Spanish."

DISTRICT PROFILE

PARLEY P. SMITH — UTAH

The soil and water conservation movement has grown rapidly in the "Land of the Mormons" in the past 7 years. Today there are 39 districts operating in Utah. They cover about 80 percent of the State. Parley P. Smith, member of the Board of Directors of the National Association of Soil Conservation Districts and chairman of the Board of Supervisors of the West Salt Lake Soil Conservation District, has had a part in this rapid growth.

Smith's first contact with soil conservation work was in 1939 when the district program was introduced in Salt Lake County. Although the Utah enabling act was passed in 1937, farmers in Parley's area didn't get around to organizing a district until 2 years later. When they did, the people of Draper wanted Smith as their representative. His name wasn't on the ballot, but they wrote it in, and he was elected.

After the election, the supervisors selected Parley as the first chairman, a position he has held ever since.

Although Parley was interested in local conservation problems from the beginning, it was not until 1946 that he became actively concerned with problems beyond the borders of Salt Lake County. In February 1946 at the annual meeting of the district supervisors at Logan, Utah, Parley was given the responsibility of planning a State organization of district supervisors. Aiding him were Hugh Erekson of Kamas and H. Ray Francom of Levan.

Later, as first president of the State organization, Parley was sent to the National Convention of Supervisors at Chicago. Here he was elected to serve as one of the 14 directors of the National organization. He has held that position for the past 2 years. He attended the National meeting in the summer of 1948 and went on to Washington, D. C., to attend hearings on proposed farm legislation.

Parley P. Smith is truly a native son. He comes from hardy pioneer stock, his father, Absolom, having migrated from West Virginia in 1852. The family settled in the community of Draper, where

Parley Smith and his good crop of young Americans: S[illegible]ding—M[illegible] Searcy, Mrs. Marion Dunn, Willis and Allen; sitting [illegible]aul, Mrs

Parley, now boasting a young 62 years, still farms. He and Mrs. Smith have a family of six girls and three boys.

Parley's hobby is "swapping" horses. He prides himself on knowing a good horse when he sees one.

The Smith place at Draper is a general crop farm, producing mainly alfalfa, grain, beets, and corn. A small pasture provides feed for one milk cow.

Smith believes that many of the present land ills in Utah stem from poor irrigation practices, and better irrigation is one of his main conservation interests. He says, "Brigham Young, the Mormon leader, showed us how to turn the water onto the land, but he forgot to tell us when and how to turn

ans: S ding—Mrs. Deon Bagley, Mrs. Clair Cordner, Mrs. LeRoy
sitting- Paul, Mrs. Smith, Parley, Carolyn; kneeling—LaRay.

it off." Parley never misses an opportunity to discuss conservation and is a firm believer in keeping control of the conservation program in the hands of farmers and ranchers.

Parley and the supervisors of the West and East Salt Lake Soil Conservation Districts have worked hard getting needed changes in the State Soil Conservation District Law. Much remains to be done and, although Parley has been succeeded by E. S. Gardner of St. George as president of the State association, he is still working to get these changes put into effect.

Last spring he was master of ceremonies at the land-grading demonstration sponsored by the West and East Salt Lake districts. About 3,000 people watched the demonstration and saw the many kinds of land leveling equipment on display.

The other day when I visited the Smith farm, we got to talking about retirement. I asked Parley when he was going to retire from the farming game. He replied that he couldn't think of retiring. At the age when many men retire, Parley P. Smith is just getting a good start!

—C. P. STARR.

HE BUILDS PONDS

By C. W. CHAPMAN

SPENCER BARBER of Moultrie, Ga., is representative of a new type of businessman—the soil conservation contractor. Because of his work, and that of thousands of others like him throughout the country, soil and water conservation application is being speeded.

Moving the earth to make a living for himself, and ponds for farmers, is Barber's specialty.

He got the idea on Guam. From his father he received a bulletin on farm contracting with heavy equipment, published by the Trust Company of Georgia, using information supplied by the Soil Conservation Service.

Although young Barber was then more concerned with building airstrips, roads, and attack facilities for the final assault on Japan, the idea appealed to him. He was heavy-equipment officer with the Army Engineers.

When he returned home, Barber easily turned into a pond-building business the knowledge and experience accumulated in 3 years studying civil engineering at The Citadel in Charleston, S. C., and more than 3 other years with the Army Engineers. Since November 1946 he has completed 25 farm ponds in the Moultrie territory, 19 of them for cooperators with the Middle South Georgia Soil Conservation District. All have been built according to specifications developed by Soil Conservation Service technicians.

Barber received his first training in farm-pond building from the Georgia Coastal Plain Experiment Station at nearby Tifton. In the fall of 1946, the agricultural engineers of this Sta-

Note.—The author is district conservationist, Soil Conservation Service, Tifton, Ga.

This model farm pond is on Georgia Coastal Plain Experiment Station, Tifton, Ga. Note irrigation equipment

Spencer Barber points out details of installation to C. W. Chapman, district conservationist working with the Middle South Georgia Soil Conservation District.

tion constructed a farm pond according to U. S. Department of Agriculture specifications. The adult education department of the Abraham Baldwin Agricultural College, located on the same campus as the Experiment Station, held a short course on farm ponds for interested people throughout the Coastal Plain. Spencer Barber and W. H. Varner, SCS technician for Colquitt County, were there. According to Barber, the inspiration for the farm-pond business came in The Trust Co. bulletin, but the know-how came from that short course in Tifton.

The Soil Conservation Service has long advocated farm ponds for livestock and food for the farm. They believe farm ponds provide a better balance as an aid to better conservation of our land resources; therefore, Varner worked closely with Barber in getting started. Varner was on the spot throughout the building of the first farm pond. Barber declares the work of the Soil Conservation Service is indispensable in his business.

Barber said that his commitments for farm-pond construction were running far ahead of his ability to build. He attributed this pent-up demand partly to the extremely rainy weather during the

fall and winter of 1947. He said he expects to stay in the farm-pond business and expand his operations gradually.

The 25 farm ponds completed by Barber are furnishing continuous water for livestock despite dry seasons. They are well stocked with fish to provide recreation and food for the farm families, because Barber advises the owner to consult qualified specialists in maintaining and fertilizing the pond. They successfully weathered all the heavy rains of 1947 and early 1948 when so many farm ponds succumbed.

The success of Barber's farm-pond business is a tribute to the cooperation among agricultural agencies: Research for better agricultural practices, as demonstrated by the Georgia Coastal Plain Experiment Station; education, as demonstrated by the Abraham Baldwin Agricultural College; and cooperation of field workers with private enterprise to get the job done, as demonstrated by the Soil Conservation Service technicians assigned to the Middle South Georgia Soil Conservation District.

SOUTHWEST

COLLECTING SEED AND KNOWLEDGE.—Students of the Branson, Colo., schools are going to make a contribution to the soil and water conservation program in this section of the country while studying soil conservation methods at first hand.

Fred Smith, vocational agriculture teacher, is having his students collect squaw bush seed for the Soil Conservation Service nursery at Albuquerque, N. Mex. This plan was worked out with the school officials, the supervisors of the Branson-Trinchera Soil Conservation District, and officials of the Soil Conservation Service.

The collected seed will be planted at Albuquerque and seedlings will be made available to farmers and ranchers cooperating with districts in the area. While making the collection, the Branson students will study soil conservation practices and learn to identify the various soil-conserving shrubs.

COOPERATIVE BUYING.—Farmers cooperating with the Bridgeport, Camp Verde, and Oak Creek Soil Conservation Districts in the Verde Valley of Arizona have been able to save more than $2,500 on the purchase of seed for irrigated pastures through the formation of a purchasing pool.

Frank Gyberg, secretary of the Oak Creek district, is chairman of the buying group. Charles Van Gorder, SCS technician, worked out the seed mixtures and developed plans for seedbed preparation and planting.

More than 10,000 pounds of grass and clover seed were ordered. This was enough to seed more than 500 acres on about 50 different farms, and large savings over individual purchases resulted.

Gyberg reports that interest in permanent irrigated pastures in the Verde Valley has increased rapidly during the last 3 years. He points out that this type of pasture provides an abundance of high quality feed on small acreage, that little labor is involved since livestock do the harvesting, and that excellent protection against erosion is assured.

GRATEFUL COTTON CROP.—Increased cotton production the first year after leveling his land more than paid for the dirt moving, says Hugh Moutray, farmer in the Seven Rivers community south of Artesia, N. Mex.

Moutray, cooperating with the Central Valley Soil Conservation District, obtained the aid of SCS engineers. Sixty-seven acres were leveled in blocks varying in width from 56 to 84 feet. Two hundred pounds of fertilizer, containing 16 percent available nitrogen, 20 percent available phosphoric acid, and no potash were applied to each acre.

Adjoining this leveled field is one on which cotton was grown following alfalfa the previous year. Moutray had expected the highly fertile field formerly in alfalfa to produce more than the newly leveled land. However, he found that the leveled field had a better crop.

This winter Moutray plans to install concrete drops on the leveled field where irrigation ditches drop from one bench to another, and also to level additional land as rapidly as possible.

UNKEMPT ACRES PUT TO WORK.—Thirty tons of alfalfa and 300 bushels of wheat were produced on 15 acres of reclaimed farming land owned by Shelby Lisonbee of Bridgeland, Utah, cooperating with the Uintah Basin Soil Conservation District.

An electrically driven centrifugal pump lifts 2 second-feet of water from the Pleasant Valley canal to irrigate land which 2 years ago was covered with greasewood and sagebrush as high as a man's head. This brush was cleared off and burned, and the ground plowed and leveled. A tractor was used to build the dike for the water ditch. Other land preparation was done by Lisonbee and his sons with teams and horse-drawn equipment.

Nine reclaimed acres were seeded to alfalfa when the pump was installed in 1947, and the seed was sprouted by the irrigation water pumped from the canal. Six acres were sown to wheat, which yielded 150 bushels. In the spring of 1948 a 6-acre strip was planted to alfalfa and the wheat broadcast in the alfalfa as a nurse crop. Another 150 bushels of wheat were harvested. Three heavy cuttings of alfalfa were made from the 1947 planting on the 9 acres.

Lisonbee believes his crop yields have repaid his full $1,500 cost of water, pump, and installation labor, and power which averaged $40 a season. He now is clearing another 15 acres for seeding next spring.

COLORADO SCORE CARD.—The Central Colorado Soil Conservation District made the highest score in the State—13,575 out of a possible 13,950—in the first annual Denver Post-KLZ Soil Conservation Recognition program.

Other winning districts: Bent, 13,350; San Juan, 13,020; Plainview, 12,675; Haxtun, 12,615 points.

The top five districts were chosen from 13 which survived regional judging conducted by leading Colorado bankers, Soil Conservation Service personnel, and members of the board of directors of the Colorado Association of Soil Conservation Districts.

The State judges, accompanied by representatives of the Denver Post and radio station KLZ, spent 2 weeks touring the State to pick the final winner, examining three farms or ranches in each of the 13 districts entered in the finals.

The San Juan district, which became the Billionth-Acre district in 1947, was cited for its accomplishments during its first year.

Plaques and cash prizes of $500 were awarded to winning districts, and three outstanding farmers or ranchers of each winning district received special scrolls.

GRASSES ON TRIAL.—One of the most ambitious and carefully planned grass-test plantings in Arizona has been made on the Henry Reidhead farm near Snowflake in the Navajo County Soil Conservation District. The test plot covers 3 acres, and the planting was done through the cooperation of the Soil Conservation Service and a commercial seed concern.

Thirty-eight varieties were planted. The mixtures include 13 wheatgrasses. Among these are four crested, two of the slender variety, and one of early crested wheatgrass.

Other grasses include the fescues, the bromes, weeping lovegrass, big bluegrass, timothy, and some rye grasses uncommon in the area.

The seeds were sown in shallow cultivated furrows on the contour, then thinly covered without rolling. The rows are about 30 feet long. Observations and comparative tests will be made in May or June, and continued over a long period.

GRASS MENU.—Irrigated pastures are the easiest and cheapest ways to produce beef without danger of bloat, according to Harry Lenart, whose ranch is in the Indian Bend Soil Conservation District near Scottsdale, Ariz.

In the spring of 1948, SCS technicians helped Lenart plan his irrigated pastures. The land was leveled and planted to a suitable mixture. The 35 acres were divided into three fields which were irrigated every 10 to 12 days.

In early July, 60 beef cattle and 10 horses were turned on the pasture. They couldn't keep the grass eaten down, and 34 tons of hay were cut in August. In early October, 35 more cattle were added, and the pastures still provided plenty of feed until frost.

Altogether, Lenart has 170 acres. He expects to use most of his available irrigation water on 85 acres of grass pasture and raise beef the easy way. He is now sure that grass will produce more feed than anything else.

RESEEDING THE RANGE.—Clearing sagebrush and planting crested wheatgrass have increased forage 10-fold on one 12-acre tract of the 4,000-acre ranch operated by Fred and Leonard Northcutt about 6 miles north of Regina, N. Mex.

The Northcutt brothers were among the first to become cooperators with the Lindrith Soil Conservation District. They started their reseeding program in 1941, when crested wheatgrass was planted on 12 acres after the sagebrush had been removed. Favorable results encouraged expansion of the reseeding program until there are now 80 acres in improved dayland pastures. Seed harvested from their own plantings and tall wheatgrass and Canadian wildrye seed obtained through the Lindrith district have been used in carrying on the program.

The Northcutt brothers expect eventually to have at least 2,000 acres in crested wheatgrass.

FUHRIMAN SHOWS FORESIGHT.—Sweetclover for green manure has profited Delbert Fuhriman, a cooperator with the Northern Utah Soil Conservation District in Box Elder County.

Last fall, Fuhriman harvested 5,000 bushels of wheat from land improved by a green manure crop of sweetclover and alfalfa. He received about $2,000 as a bonus for high protein content, and the yield ran about 20 percent more than adjacent fields not similarly treated.

Fuhriman's soil conservation plan provides for contour strip cropping, crop residue management by stubble mulch farming, sweetclover as a green manure crop, and alfalfa and grass for hay and pasture. All this is included in a crop rotation to maintain soil fertility on his 912-acre dry farm in Pocatello Valley near the Utah-Idaho border. The plan also embraces reseeding and proper management on 3,040 acres of range land where he raises top-quality Herefords.

Fuhriman has operated this place 10 years. When he started, it had an average wheat yield of less than 15 bushels per acre. The 1947 yield ran 28 bushels per acre. Ten years ago erosion was severe, gullies were getting deeper, and the soil was generally run-down. All this is being changed. Major gullies are being graded and seeded to a mixture of sod-forming grasses. Yields have been vastly improved. The soil is being held in place and the moisture is being absorbed where it falls.

NORTHERN GREAT PLAINS

WATER WHEN WANTED.—Spring runoff water from the hills is his insurance against livestock feed shortages in winter, according to Joe Eggen, Archer, Mont., a cooperator with the Reserve Soil Conservation District.

This is because, as part of his farm conservation plan, he is developing a complete water-spreading system on his bottomland instead of letting the runoff go directly into Muddy Creek.

"We've got 65 acres under flood irrigation now," Eggen reports. "We have about 50 acres yet to go.

"I had my first flood-irrigated field in wheat in 1946. It yielded 30 bushels per acre compared with 15 to 20 bushels on dry land. Now it produces just as well in alfalfa for hay. Last fall I had 14 big stacks."

Eggen's lay-out is made up of 2,400 acres of range in the upland and about a quarter section in the broad Muddy Creek valley. He keeps a herd of 120 beef cattle.

Technicians designed a series of dikes that picks up the runoff as it comes from a coulee and keeps it from the creek as long as it can be used.

Each dike has a gate, so that after one field is given a thorough wetting, the water can be let onto another field. In this way, the water is kept moving slowly downstream until the excess, if there is any, is released into the creek at the farm's lower edge. One dike is also the entrance road from the highway to the farmstead.

The area in which the Eggen farm is located is one of usually limited rainfall. Sometimes it is less than needed by a crop. On the other hand, Muddy Creek drains a huge area and the coulees carry a large amount of water during the spring runoff.

Various farmers in the valley have done some water spreading since the early days. And since the Reserve Soil Conservation District was organized nearly 10 years ago, SCS technicians have helped to develop water spreading on nearly 3,500 acres on more than 25 farms.

HEAVIER LAMBS.—Crested wheatgrass for lambing pasture, deferred grazing of range, better winter feed supplies, and elimination of herding—all parts of his conservation plan—are paying out in heavier lamb weights and lower expense, says Kenneth Kerr of Passaic, Wyo., a cooperator with the Dutch Creek-Clear Creek Soil Conservation District. Formerly Kerr's lambs weighed about 65 pounds at market time; last year they weighed about 76 pounds.

Crested wheatgrass is used for lambing pasture because it starts growth so early. The ewes, on green feed, fur-

nish plenty of milk to give the lambs a good start. This grass also supplies pasture that enables Kerr to defer the use of his native grasses until they get a good start.

Having the pasture divided into six parts for use in rotation made it possible for Kerr to stop herding. In addition to saving the cost of the herder, this arrangement lets the sheep graze at will. The sheep are moved from one pasture to another at intervals of 2 or 3 weeks. This gives the grass a chance to grow between grazings.

Water is now in easy reach of the sheep. They keep well spread out while they are grazing.

Coupled with the early spring pasture and deferred grazing is the better winter feed supply. Water-spreading has increased hay production by one-third. Besides being able to winter the stock in better shape, Kerr has reserves to help through dry seasons.

Kerr makes it a practice to visit the sheep two or three times a day while they are on pasture. Some coyote losses occur, he says, but they are practically the same under his present range-management system as they were when he had larger pastures and employed a herder.

UPPER MISSISSIPPI

RURAL CARRIER COMMENTS.—Roy Walters, director of the Barry County (Mich.) Soil Conservation District, spends about half his time as mail carrier on a rural route. He is interested in all farm labor-saving methods calculated to help him operate his 140-acre farm on a half-day basis.

Walters finds that soil conservation farming saves considerable labor and also reduces machinery costs and other expenses. A complete farm conservation plan, developed with the help of SCS technicians, led him to shift from a corn-oats-meadow rotation to one which includes only alfalfa, bromegrass, and wheat. His high-producing herd of Holsteins provides some of the labor of harvesting the grassland crops.

The following is Walters' own report:

"For several years I looked for ways to control erosion and still keep corn in the rotation. Unless I made all the corn into silage, I had to plant oats instead of wheat following corn. But oats were an unprofitable crop for me. Corn yielded well for the first few years, then it suddenly didn't because of dry weather. One day Mr. Ball, of the Soil Conservation Service, suggested that wheat might be better than corn in this locality. Wheat, he said, took advantage of the fall and spring moisture that we have. This sounded good, so since 1944 I have followed a rotation that included only alfalfa and brome and wheat.

"Perhaps my gross receipts are smaller under this rotation—which I doubt—but I do know that my expenses are much smaller and my net return is greater. I need less machinery and less tractor fuel.

"Over a period of a year my labor requirements are more evenly distributed. I have no spring and fall rush periods and cultivating corn doesn't compete with haymaking. It is a real pleasure to be able to hunt pheasants while some farmers are still filling silos or worrying about getting their corn picked. So far I have been able to sell wheat from an acre of land and buy more corn than I could have raised on the same acre. And I do it with much less work."

—J. S. CUTLER.

FULL-SCALE CLASSROOM.—The vocational agriculture class of the Jewett High School, in Harrison County, Ohio, now has a 120-acre farm on which it will experiment with soil conservation and other modern farming methods. The farm was given by C. C. Fay, strip-mine operator.

Part of the farm consists of spoil banks left by strip coal mining operations. The class hopes that its study of these spoil banks will develop some economic use for the thousands of eastern Ohio acres which are in similar condition. The farm also has 12 acres of timber, 40 acres suitable for pasture, and about 40 acres suitable for row crops.

Acquiring the farm brings to realization a 10-year plan of Superintendent R. A. Kammeyer and Elias Lewis, vocational agriculture teacher. Assisting Lewis are John Feisley, work unit conservationist, and representatives of the Ohio State University, the Wooster Agricultural Experiment Station, and State and county conservation agencies.

BIG DAM.—Pouring money into a hole in the ground isn't usually recommended as a way of getting rich. But eight Boomer township farmers, cooperators with the West Pottawattamie County, Iowa, Soil Conservation District, expect it to pay dividends because they are putting $3,000 into the control of a 70-foot gully.

These eight farmers banded together for the construction of a storage-type dam to check erosion which was not only eating away good farm land but also was threatening a county road. The dam is 50 feet high, 320 feet wide, and contains 20,000 cubic yards of earth, and it has created a 5-acre pond which is 40 feet deep in one place.

The dam is on the farm of Arthur Thomas. Others who contributed to its cost are Howard Nelson, William Hill, Hubert Minton, Henry Lilvedahl, the Athey Brothers, and Alfred Nelson. Howard Nelson owns a farm up the ditch from the Thomas dam and plans to build a dam on his own land this year at his own expense.

"I'm tired of seeing my soil head for the Gulf of Mexico," he says.

The 220-acre watershed which is drained is all under a conservation plan. The operators were among the first to form a soil conservation planning group. Terracing, grassed waterways, contouring, adapted rotations, and pastures are the main practices.

A county road has been relocated several times until it is 50 feet from its original location. Stopping the spread of the gully will protect it too and cut down on highway maintenance costs.

"Now when we put in a drainage structure we know it will stay," said Paul Mahoney, county engineer. "So many times when we put in tubes or bridges, we have had to replace them in a few years because of erosion."

GULLIES STAY SHUT.—Ed and Elmer Kolmerten, whose farms lie side by side just north of Fort Wayne, Ind., have put soil conservation into practice on an extensive scale with the help of the Allen County Soil Conservation District. On these farms are contour farming, terracing, pasture rejuvenation, fertilization, liming, and improved rotations.

"Year after year we had to plow the gullies shut in one field before we could do anything with it," Ed said. "One gully often was 3 feet deep. We put terraces on the field 2 years ago and haven't had to plow the gullies shut since."

During heavy downpours the water formerly rushed down a small valley onto a lane and a lowland pasture. The floods would wash the lane out and before it could be used again Ed had to fill the gullies. Ed and his dad built a diversion terrace at the mouth of the little valley and the water is now shunted southward into Spy Run.

A steep, eroded spot in one of Elmer's contoured fields was left as an unplowed correction strip. He's seeding that to alfalfa to prevent further erosion. In this and in other fields on their farms, where the rows cross low spots or draws, the Kolmertens leave sodded waterways.

The tractor uses much less gasoline and there's less wear and tear on machinery because all of the work is done on the level. The Kolmertens are convinced that terracing and contouring pay off. Water is slowed down so more soaks into the ground. The decreased runoff re-

duces erosion. With less washouts and more water, crops are better.

"I can't help but feel that in the average year, the crop is better because the fields hold more water," Ed declared. "Our loss before came in the soil that's gone. We should have caught it 20 years ago."

NORTHEAST

Timber being cut selectively in newly opened area.

CYPRESS SWAMP.—Grow up and burn down has been the history of Cypress Swamp or Burnt Swamp as it is called by the local people in Sussex County, Del.

This is the largest privately owned tract of woodland in the State of Delaware. Although there are about 20 owners, Lee and Halstead Layton own together more than 7,000 acres of the rough total of 10,000 acres. Beginning about 1912 the Layton brothers started buying up land in and around Cypress Swamp. In those days the swamp was crisscrossed by county roads and there were clearings where settlers were living.

Originally the swamp consisted of white cedar and cypress, together with loblolly pine and gum and maple. Most of the virgin cedar and cypress was cut out at an early date. Uncontrolled fires burned through the swamp destroying the roots of the remaining stands. These trees fell over and slowly sank into the black mucky soils. In later years these trees were mined by the local people. The mining consisted of prodding the ground with a metal rod until a log was hit and then digging out the log. These were made into cypress and cedar shingles. The fires finally eliminated the reproduction of cedars and cypress and set the stage for lobally and hardwoods.

In 1926 a drainage canal was dug through the swamp, practically cutting it in half north and south. A few lateral canals were cut to the south of the main canal in order to drain the wettest areas. This lowered the water table which, in turn, created ideal conditions for loblolly pine. The so-called islands or higher areas contained some beautiful stands of pine and hardwoods. By this time the county had abandoned the roads and they grew up to pine. This, plus the ditching, resulted in the area becoming an isolated block of timber approximately 20 square miles bounded by roads and farm lands.

There hasn't been any major logging operation in the swamp for years. Such cutting as took place was along the edges and on some of the islands.

Fires burned over the entire area at one time or another. Loblolly pine seedlings blanketed the area after the fires, only to be burned out later. Because of the lack of roads and trails it was impossible to get men or equipment into the swamp to fight the fires. Firefighting took place along the edges adjacent to fields and roads.

In 1944 the Layton brothers applied to the Sussex County Soil Conservation District for a woodland farm plan. In the meantime the adjoining land owners also filed applications with the district.

The first step was to open up the old county roads with a bulldozer followed by a grader. Some of the work was done by private contractors and some by district machines. To date over 10 miles of roads have been constructed through the swamp. After the roads were opened the land owners petitioned county authorities to legally abandon the roads. After this was done the roads were blocked to keep traffic out. This was done to prevent trucks from dumping refuse in the woods, which is a custom in this section, and also to prevent irresponsible motorists from starting fires. State Forest Service, fire wardens, SCS personnel and the landowners have keys. Foot travelers such as hunters and hikers are not prohibited, as it is thought such people have a responsibility for preventing fires.

These roads are also used as access roads to remove merchantable timber. This past year piling, mine props, saw logs, and veneer bolts have been removed. By the end of the year these products will have more than paid for the road construction. There hasn't been a fire in the area for over 2 years. The entire area has a woodland management and protection plan that is being followed by the landowners.

This is one of the few places in Delaware where deer are found and it is hoped that, with protection, they will multiply and move into some of the larger wooded areas nearby. Beaver are also found in some of the ditches and canals, along with ducks, egrets, and blue heron. The opening of the roads will increase the bird population, according to the edge theory. Den trees are being left on the islands to house the coon and squirrel population.

The swamp that has lain dormant for many years is now, with fire protection and a woodland management plan, giving a monetary return to the owners in the form of timber and an intangible return in the wildlife and recreation to both the owners and the community.

—HARVEY R. FRANTZ.

H. P. Layton, co-owner of swamp, standing in a road constructed this year.

HE WAS NO. 1000.—When Holly F. Miller, Leon farmer, became the thousandth cooperator with the Western Soil Conservation District in West Virginia, M. C. Lewis, secretary, developed a page-one feature entitled "Conservation Progress," illustrated with a 2-column picture of Miller signing the agreement. It captured nearly a column and a half of text and picture space in the *Point Pleasant Register* and, as an eye-catcher, really dominated the front page.

The same plan might well be used in many districts where it could be built around the first, second, third, hundredth, and so on, cooperator who signs up. There is no necessity of waiting for No. 1000.

GI'S SPEARHEAD CONSERVATION.—Less than 2 years ago the Jackson County, W. Va., Agricultural Council, representing all agencies operating there, adopted "Agriculture in and for Jackson County" as its slogan. It was agreed "that all agricultural agencies and workers in agriculture in the county would talk the same practices when dealing with farmers in the county; and that they would work up a program and recommend practices that every worker could follow and use in his contacts with farmers."

GI training-on-the-job bobbed up about that time and the council proceeded to put its new program to work with that group and with the Vo-Ag students. It agreed to put emphasis on soil and water conservation. Schools for instructors in these groups were established and field demonstrations were held. Less than 2 years after the council program was launched, the *Jackson Herald*, at Ripley, says: "Results are far beyond expectations."

A conservation farm plan has been established on the farm of every veteran. By next spring every Vo-Ag student will have a conservation farm plan completed for his home farm. In the 160 agreements to date, GI trainees and Vo-Ag students have this record to show:

10,475 feet of diversion ditches
1,132 acres of pasture improvement
2,971 acres of pasture mowing
31 springs improved for stock water
32 acres of pasture reseeding
996 acres of cover crops sown
430 feet of sod waterways established
12,263 feet of stream channel improvement
18 acres of feed and wildlife cover planted
12 acres pasture rotation established
409 acres of strip cropping
170 acres of contour furrows
182 acres of clearing
2½ acres of tile drainage
7½ acres of new woods planted
17 acres of pasture mulching
10 farm ponds constructed
52 gullies controlled
531 acres of alfalfa seeded
74 acres of woodland protected

The Agricultural Council says, "We feel that all this was made possible in our county only by the planning and understanding that exists when all agencies work together for 'Agriculture in and for Jackson County.'" The council members are: N. K. Speicher, county agent; B. I. Speicher, Soil Conservation Service; F. W. D. Parsons, coordinator for veteran trainees; Lawrence Cavendish and Clyde Hibbs, Vo-Ag instructors; D. J. Rogers, president of Jackson County Farm Bureau, and R. R. Hyre, agricultural conservation program.

PINES GAIN FAVOR.—Farmers have changed their ideas as to the kind of trees they want to plant. Fifteen years ago, Jack L. Barrick, work unit conservationist at Philippi, W. Va., recalls, "You were likely to be run off the place with a shotgun if you as much as mentioned planting pine trees on a farm." In those days farmers wanted only locust trees.

Now, says Barrick, "The farmer's cry is that he cannot get enough pines. After wondering a lot about what caused this change in attitudes, I've come to the conclusion that the conifers have sold themselves to the farmers; that farmers have come to recognize that pines are beautiful as well as valuable in covering poor eroded banks, in service as windbreaks, and as a source of future lumber and extra cash income."

PONDS PEP UP PRODUCTION.—Farm ponds are increasing efficiency in New York dairy farm operations. "I feel that the increase in milk production since I piped the water to my barn has paid for the cost of constructing the pond," says Paul Rigoni of Pavilion, Genesee County. "Then too I have fire protection for my buildings, swimming and boating for the youngsters in summer, skating in the winter, and now that we have planted 550 fingerling bluegills and bass in the pond, I'm looking forward to the fun of fishing."

HIGH UP IN VERMONT.—Earl Hackett is rehabilitating a largely abandoned farming community in the town of Holland, tucked away in the northeastern part of Orleans County, Vt., next to the Canadian border. There are three more years of work ahead before he and his helpers can get the job done. Hackett, chairman of the supervisors, Orleans County Soil Conservation District, owns several farms, including one where he was born. With the help of other landowners and the town, he has relocated and rebuilt 3.5 miles of road, "built up" to avoid drifting snow. Repair of houses and barns is in progress. Many acres of fertile land in the Calais series have been cleared, smoothed, drained, and seeded down. Recently a bulldozer has been purchased to speed the program.

SAMPLE SOLD THEM.—Once a farmer gets a taste of the lasting benefits from soil conservation, he usually wants more. It may take time, but results do come.

Years ago when a CCC camp was operating in that region, some soil conservation practices were applied on the J. C. Baker & Bro. farm, near Greenville, W. Va. Trees were planted in two gullied areas. Both plantings have made good growth and are now 10 to 12 feet high. They are giving real protection to the land and growing into something that will be even more valuable. Part of the pasture was contour-furrowed 8 or 9 years ago. This area is now well-covered with bluegrass and white clover. The furrows are nearly level and are well-sodded. They have served their purpose—holding moisture and soil and plant food on the land so sod could be more easily established.

The Bakers think it's wonderful. Last week they had a conservation farm plan made for the entire farm, Harrison H. S. Cassell, Jr., work unit conservationist, reports in the *Monroe Watchman*.

FEEDING SOIL MAKES MILK.—It took Roblee Mason of Pawlet, Vt., only a few days to learn from experience that fertilized pastures add extra dollars to the milk check. He had been pasturing some good milkers on well-fertilized pasture, and they had been producing 1,080 pounds daily. When he turned them into an unfertilized pasture under old sugar bush, they immediately dropped to 880 pounds. After a few days of this disappointing production, Roblee put the cows back on the fertilized pasture. Without hesitation they thanked him to the extent of 1,080 pounds per day, as before.

THREE-POINT RESULTS.—In 1946 F. P. Meigs began to apply soil conservation practices to his 150-acre Stone Rows Farm, near Raven Rock, N. J., in cooperation with the Mid-Jersey Soil Conservation District at Flemington. The land is poorly drained and, although the slope is gentle, runoff and erosion had been excessive. He has 67 acres in cultivation and has terraced and contour-farmed four fields containing 35 acres and built 5,000 feet of diversion terraces. Recently he wrote Fred Totten, district chairman, "The terraces and other soil conservation practices established on our farm have accomplished the following: Enabled us to plant crops earlier than formerly and to till portions of the farm which previously were usually too wet to cultivate; eliminated silt from the storm water in the drainage ditches to an unbelievable extent; and increased the yield through the greatly reduced, and in some sections practically nil, soil erosion."

In the remainder of his crop acreage, Meigs will apply terraces and contour strips before his 5-year program is completed. Other practices on his farm include pasture seeding and improvement, and wood lot and wildlife management.

SEEING IS BELIEVING.—Effectiveness of "farm face lifting" projects in stimulating interest in adoption of conservation practices by farmers is demonstrated in the Guyan (W. Va.) Soil Conservation District which embraces Cabell, Lincoln, and Wayne Counties.

"As the result of the big demonstration at Rio Grande College farm, across the river in Ohio," says E. H. Schmidt, district conservationist, "our district has more applications for farm plans and requests for technical assistance and for earth-moving equipment than can be handled. The step-up in applications since the Rio Grande 'face lifting' has been striking."

SHOW 'EM AND TELL 'EM!—Hampshire (Mass.) Soil Conservation District supervisors have adopted two new methods for getting new cooperators. On the Owen McNiff farm, along the main highway between Amherst and Northampton, is installed a system of strip cropping and diversion terraces that is beautiful to behold. The supervisors have erected a sign, 4 by 6 feet, at one end of the field close by the road. It carries a colored map of the field showing diversions and strips and an explanatory legend.

The supervisors—Henry Renouf, Arthur C. Bardwell, and Elwyn Fowles—also have bought some books on soil conservation and are circulating them to town libraries. Local newspapers are asked to publicize their availability to borrowers.

PEACHES WITH CONTOURS.—When peach orchards are planted on contour, a farmer gets better results from fertilizer, Vinson Reid, Chelmsford, Mass., cooperator in the Middlesex Soil Conservation District, learned last year. In the spring Reid set out 3 acres of land to a new peach orchard after about 1,200 feet of diversion ditch had been constructed and the fields had been contoured by district technicians. In October Carl Clark, SCS planner, noted that trees planted on the contour had a much healthier appearance than similar trees planted in straight rows in a nearby orchard. Also, the contour-planted peach orchard had made nearly double the growth of the second orchard, planted at the same time and receiving the same treatment. Reid says he is convinced that he will get most results from his fertilizer when it is applied to crops planted on contour.

TALE ABOUT TILE.—Past errors were uncovered and repetition prevented when Vernon Johnson, work unit conservationist, Franklin (Mass.) Soil Conservation District, laid out an intercepting tile system to drain a seepage area which was spoiling a 20-acre hay and pasture field on the Galbraith farm in Colrain. Farmer Galbraith was not sure that an interceptor system was what he needed to catch the water before it seeped to the surface. He favored laying individual tile lines straight down the field from each wet spot, but finally agreed to let the technician try his plan. To everyone's surprise, when the digging started, nine distinct lines of tile were discovered running up and down the slope. Someone previously had unsuccessfully tried to solve the problem. When the interceptor system was correctly installed, water immediately began to run into the tile line. The field is now pretty well dried out. Galbraith sank a barrel in the ground and turned the seepage water from the tile into it. Now that the field is drained, and since stock water is available, the pasture can be subdivided for rotational pasturing.

TIPS ON CONTRACT JOBS.—Constant work with contractors pays off. "By operating that way," says Charles W. Turner, district conservationist, Worcester, Mass., "we can clear land with a negligible loss of topsoil, build dugout ponds for as little as 12 cents per yard, dig ditches for 12 to 15 cents per yard or 10 to 15 cents per running foot, move walls for 25 cents per foot, or bury them for 35 cents per foot."

Elmer Valentine, conservation aid, worked out an interesting technique with a big operator who was ditching with a bulldozer. One of the biggest drawbacks in using a bulldozer for this kind of work in stony and wet soil is that the bulldozer blade leaves a rather rough and unsightly job. When Valentine recently had a ditch job in land like this, he asked the operator to change to a grubber blade and rough out the ditch, raking out all the stones, stumps, etc. Then they changed back to the straight blade and smoothed out the job, leaving a swell looking ditch.

Turner's aides take a contract operator to a farm, show him the job that is to be done, and know that he understands and will do it well before they leave. This gives the aides more time to get to other farms, because they do not have to stay on the one job all the time. Naturally, drainage work must be checked. They have reduced this to a minimum by having the contractor cut to the proper depth at each 100-foot station along the ditch line while they are there with the level. This is usually an hour's work. After that the contractor can fill in the blank spaces to grade by himself, Turner says.

GROWING UP WITH TREES.—Since 1941, 1,379 farmers in Oneida and Madison Counties, N. Y., working cooperatively through soil conservation districts, have reforested more than 1,500 acres. This has involved the planting of more than 1,300,500 seedlings. Last year in these counties, farmers, 4–H and FFA members, and Boy Scouts reforested more than 400 acres. In Oneida County, 27 youngsters set out 27,000 evergreen seedlings. Availability of trees from State nurseries limited the plantings.

SOUTHEAST

MESSAGES FROM THE SKY.—When K. N. Tucker learned that it would be very difficult to get notices of a soil conservation group meeting distributed by mail because of incomplete mailing lists and overlapping routes, he hopped in his plane and, flying at from 200 to 500 feet, dropped mimeographed notices over each house in the community.

Children and adults alike rushed from the houses to pick up and read the notices. Tucker, who is a Soil Conservation Service technician in Morgan County—a part of the Northwest Alabama Soil Conservation District, said that more than 50 adult farmers attended this meeting in the Massey community. Fifteen of these farmers applied for assistance from the district.

Three other community meetings were later announced in a like manner—all with surprisingly good results. One farmer said he walked one-half mile to pick up a notice that fell near his neighbor's house. Seventy-five people attended one meeting, and more than 100 the other two. This was about 95 percent of all the farmers living in the communities. Local people stated that this was the largest number attending any farm meeting there in several years.

ARSENAL LANDS.—The Post Engineers of the Huntsville Arsenal in Madison County, Ala., asked District Conservationist Charles N. Kearley to assist them in protecting arsenal lands. It was decided to restrict the use of the arsenal lands to their capability for safe use as indicated by soil conservation surveys.

They are now enlarging the capability maps and coloring them. The recommendation of SCS and the Northeast Alabama Soil Conservation District must be followed by any farmer leasing arsenal land. Already farmers are coming to Kearley's office at Huntsville inquiring about the land capability of portions of this land.

MAKING FARM PLANS.—If you want to know what should, may, can, or will be included in a complete farm soil and water conservation plan, you will need to consider six factors to get the answers, according to John Slone, zone conservationist, Spartanburg, S. C.

The capability of the land indicates what *should* be planned.

The farm economy indicates what *may* be planned.

The equipment and supplies available, crop adaptations, and the possibility of applying practices will indicate what *can* be planned.

The wishes of the farmer indicate what *will* be planned.

FLORIDA BULK-PURCHASES.—Thousands of acres of land in northwest Florida were seeded last fall to promising new grasses and legumes through the bulk-purchase of seed by soil conservation district supervisors.

Last fall, the supervisors of the Ochlockonee River Soil Conservation District purchased 10,000 pounds of reseeding crimson clover seed and 15,500 pounds of sweet lupine. The Jefferson district supervisors purchased 14,000 pounds of this clover seed and 7,500 pounds of Kentucky 31 fescue. These were distributed to cooperating farmers.

The Gadsden and Chipola River districts have discontinued such bulk-purchases because enough seed is now being produced locally to meet local demands. The Chipola River district supervisors bought 1,500 pounds of crimson clover seed in 1945 for local farmers. Larger purchases were made in 1946 and 1947. Last fall, 70,000 pounds of seed of this soil-improving crop were planted by the Chipola River district farmers for winter cover. A local supply has developed that will permit extensive plantings, and the district supervisors no longer purchase crimson clover seed.

ECHOES FROM BAXLEY.—To members of the Baptist churches of Georgia the gigantic transformation of the 1,300-acre farm of the Georgia Baptist Children's Home last November is a story of dramatic achievement and of practical religion.

At this church farm near Baxley, Ga., miles of terraces were run, old fields were stumped and converted to pastures, two fish ponds and a swimming pool were constructed, new pastures were seeded, roadbanks were stabilized, vineyards laid off, fences built, an irrigation system installed and the entire place made more productive. The superintendent stated that the value of the farm had been increased by $150,000 in the 1 day.

There is more to the miracle than meets the eye. As every conservationist knows, the greatest problem we have to meet is to secure general acceptance of the soil conservation "idea." Erosion can be licked, we have the men and the know-how, but before we can turn the men, material, and know-how to work at their best we must have public demand. There is no better way to gain public backing than by working through and with the churches of the Nation.

The Georgia Baptist Children's Home supplies an example. The home is supported by the Baptist churches of Georgia, of which there are about 2,700. A list of donors shows churches giving as little as $1 or $2 to the home. But *all* of them give something. And thus *all* of them have an interest in the welfare of the home. To transform the home farm into one of increased usefulness, in the presence of 50,000 people, including all of the officials of the Baptist churches of Georgia, is to sell the "idea" of conservation to a mighty throng.

When the churches and Sunday Schools of our country come to regard the earth as the Lord's footstool, the mightiest of forces will have been recruited on the side of conservation.

The transformation of the Baptist Children's Home farm at Baxley was an outstanding accomplishment in behalf of conservation. Already the Methodists are making preparations for a similar day next spring at Rhinehart College, Waleska, Ga.

—CHANNING COPE.

SERICEA BUILDS LAND.—D. A. Grace, cooperator of the Northeast Alabama Soil Conservation District near Scottsboro, knew that sericea lespedeza was holding his sandy mountain land and also supplying good hay and grazing. But he did not realize until recently that it would boost his corn yield from 50 to 136 bushels per acre.

Grace and his neighbors measured 136.64 bushels of corn produced on an acre that had been in sericea for 6 years before it was plowed up in the spring and planted to hybrid corn. On land adjoining this acregae where no sericea had been grown, he gathered only 50 bushels per acre even though it was fertilized and worked the same as the high-yielding field.

"Sericea did it," Grace explained. "The fellow who owned this farm previously had planted several acres of the steeper land to sericea as a part of his soil conservation plan.

"I decided to plow up that 6-year-old sericea last spring, plant it to corn, and see what would happen. I fixed the land, fertilized it with 300 pounds of 4–10–4 and 300 of basic slag, and planted a good hybrid corn. I side-dressed the corn with 300 pounds of a 32.5 percent nitrogen fertilizer. I attributed the high yield to the fact that sericea had improved the land, because the same kind of corn next to this area, fertilized with about the same mixture, produced only 50 bushels to the acre."

The Alabaman now plans to expand his acreage of this deep-rooted perennial legume so as to have several acres of 4- to 5-year-old sericea to plow up and plant to corn each year. "I can't lose," he said. "Sericea makes good hay and grazing and won't let my soil wash away."

—BARRINGTON KING.

BANKERS HONOR FARMERS.—Eighty-seven farmers of the Central Georgia Soil Conservation District received special awards from local bankers in the district through the Georgia Bankers Association at a meeting held at Cochran, Ga., early last fall. Farmers were selected for outstanding work in establishing soil conservation practices.

C. B. McAllister, president of the Georgia Bankers Association, Statesboro, Ga., presented to each farmer a framed certificate in recognition of his achievements. Brown Rawlings, agricultural economist of the Federal Reserve Bank of Atlanta, delivered the main address in which he told of the need for more soil conservation work on Georgia farms, and of the part banks are ready to take to help farmers to conserve and build up Georgia's farm land.

R. F. Burch of Dodge County, one of the winning farmers, delivered a speech of acceptance.

Lewis S. Leach, president of the State Bank of Cochran and chairman of the local banking committee, presided.

M. T. Riner, Sr., chairman of the board of supervisors, told of the aims and objectives of the Central Georgia Soil Conservation District. He also cited the accomplishments of the district since its organization in 1940.

Each of the 87 farmers has established some or all the practices called for in his individual farm plan and enough of each practice to make a total of 90 points out of a possible 100. Practices included rotations on good cropland, kudzu or sericea on badly eroded and idle land, terraces with proper disposal areas, pasture improvement, contour cultivation, wildlife development, and in some cases a stock or fish pond.

RETURNS PILE UP.—A 1-day face-lifting demonstration helped the Schley Grange of Orange County, N. C., to win a modern new meeting hall in a Nation-wide community contest sponsored by the National Grange and the Sears, Roebuck Foundation.

The demonstration held last spring on the Milton Latta farm, in cooperation with the Neuse River Soil Conservation District, was so successful that it spurred the community to other activities. With $700 made by selling brunswick stew and barbecue at the demonstration, the women of the community bought game equipment to set up a youth recreation center in the Grange hall. After a meeting with officials of the telephone company, the men of the community agreed to obtain rights-of-way and to cut and set cedar poles for a 15-mile telephone line, and the company agreed to string the wires. Other projects included a home-beautification program and landscaping the grounds of the community church. It was on the basis of these five projects that the 64-member Grange was awarded the national prize in competition with 1,400 local granges in 37 States. "We figured we couldn't lose," explained Master Fred T. Reitzel. "We were working on things that the community needed and the improvements would have been worth the investment, even if we hadn't won the prize."

But the Schley Grange doesn't propose to rest on its laurels. Its secretary, Mrs. Clairborn Wilkerson said, "We're going to adopt as our motto: 'We can't sit down now.'"

WESTERN GULF

LANGUAGE SCHOOL.—Businessmen of Hobart, Okla., believed they could do more about soil conservation if they knew how to talk about it with their customers. Recently, therefore, 100 of them went to soil conservation school. There they learned the language of soil conservation.

On the "faculty" were Kiowa County Soil Conservation District board of supervisors and various agricultural agency representatives. The Hobart Chamber of Commerce sponsored the event, held each night in the Emerson School lunchroom.

Students heard discussions, did homework, and took part in quiz programs. The latter was on conservation terms. The businessmen tripped over such terms as soil organic matter, cover crops, sheet erosion, humus, and others which are everyday language to farmers and ranchmen around Hobart.

Leland White, president of the chamber of commerce, who also was a student, opened the school. Sid Barnes of the chamber's agricultural committee served as principal. Leon J. "T-Bone" McDonald, assistant State conservationist, was the first teacher.

McDonald was followed by J. Bryan Gentry, chairman of the district. Gentry explained what a soil conservation district is. He emphasized that the soil conservation district is not a part of any agency of government, but rather is a local unit sovereign in its field. Gentry also spoke of the accomplishments of the Kiowa district.

Questions based on McDonald's and Gentry's discussions were tossed at two teams chosen from the students. Barnes fired the questions, and faculty members judged the answers. The audience was called on to answer questions the contestants couldn't handle. The competing teams called themselves "Water Erosion" and "Wind Erosion."

The second night of the school found Edd Roberts, extension soil conservationist, talking on soil and land classification. He said that the best use for one kind of soil or another is quite likely to be the most profitable use also. With him on the program was Russell Cocanougher, district field representative of PMA, who discussed the soil conservation phases of the PMA program.

Wesley Chaffin, extension agronomist of Oklahoma A and M College, discussed soil-improving crops.

School principal was Sid Barnes.

J. Bryan Gentry, supervisors' chairman.

At recesses there were coffee and doughnuts.

Credit for the idea back of the school is due Fred Whitington of the Hobart Soil Conservation Service office, McDonald, Barnes, and Gentry. For a year or more, they have been telling each other how helpful it would be if everyone around Hobart knew the right language.

—DAVID O. DAVIS.

THEY'RE TELLING TEXAS.—Under the leadership of their State organization, district supervisors in Texas are acquainting the public with the district set-up. They are taking advantage of every opportunity to make people as conscious of soil conservation districts as they are of counties and school districts.

Soil Conservation District Day was scheduled for the first time at the Fort Worth Fat Stock Show in January and at the Houston Stock Show in February. Ribbon badges identified district supervisors and cooperators at the shows.

THEY KNOW GRASS.—Fifty-nine boys competed in a grass-judging contest sponsored by the Brazoria-Galveston Soil Conservation District at the 1948 Brazoria County Fair. These boys, members of 4–H clubs and FFA chapters of the district, spent 2 hours studying the grass plants and marking their answers.

Three boys tied for first individual prize with 59 out of a possible 60 points. Tenth place had a 2-way tie with 53 points.

COWS DO THE CLIPPING.—Irrigation ditches must be properly maintained. Maintenance includes shaping as well as weed control. One method is to establish grass on the banks and in the ditch itself. The grass keeps the ditch from eroding and the banks from fluffing. It assists in controlling weeds. It also may provide grazing.

On recommendation of SCS technicians working in the El Paso-Hudspeth Soil Conservation District, Jim Surratt, manager of the Schuster farm near Fabens, Tex., planted grass on several irrigation ditches in 1947. He fenced the ditches and grazed them with cattle. He liked this type of maintenance so well that he planned to plant grass on additional irrigation ditches.

Here's what he reports: He grazed two cows and calves on the grassed irrigation ditches from April to September 1948. He sold the cows and calves for a net profit of $75. In prior years it cost him $618 to maintain the same ditches by hand. Therefore he had a profit and a saving in costs of $693.

—J. H. BARKSDALE.

TEXAS GRASSES.—The 1948 State Fair of Texas had a new and different kind of exhibit that proved so popular it will be made a regular feature. It was an exhibit of live forage grasses.

Occupying a space 100 feet long and 30 feet wide, the exhibit consisted of 5 plants each of 40 different specimens of range and pasture grass, representative of every part of Texas.

The exhibit attracted continuous attention from the time the fair opened until it closed. Many farmers and ranchers asked practical questions and jotted down the answers in notebooks. Ranchers who have become grass conscious through their soil conservation program seemed pleased when they could identify the various plants without reading the labels.

Vocational agriculture teachers used the exhibit to impress FFA members with the importance of grass. Even cityfolk were attracted to the exhibit, many women declaring they had never before realized the beauty of some of the prarie grasses. A New York City youngster said the exhibit was the prettiest thing he had ever seen.

BIG EVEN FOR TEXAS.—Texans, of course, may not think it unusual, but the record-breaking fish production in J. W. Friday's farm pond at Winnsboro, Tex., is really an outstanding achievement. Friday is a cooperator with the Hopkins-Rains-Wood Soil Conservation District. Three years ago his pond was stocked with fish and managed according to advice from local SCS technicians. Mr. Friday was given suggestions on fertilizing the pond and told particularly to fish it hard. He has carefully followed those suggestions.

In 1947 the Friday family ate 63¾ pounds of fish caught from their quarter-acre pond, and in 1948—up to October 6— a whopping 170 pounds! At that rate, production runs to 900 pounds per acre. Friday's young son deserves credit for the statistics. He kept records as part of his 4–H Club work.

The Fridays have caught nine ¾-pound channel cats and some 3½-pound bass—bigger ones got away! Bluegills have run over half a pound. Friday's pond originally was stocked with crappies, in addition to the other species, but he has found them to be a nuisance and is removing them as rapidly as possible. During last summer Friday seined 18 pounds of stunted crappies, and later an additional 65 pounds of crappies and miscellaneous other species. During the seining, 150 pounds of edible-sized fish were returned to the pond.

The Fridays have used 100 pounds of 4–12–4 fertilizer per month during the seven warmer months of the year. They keep a first-class growth of algae in the water through the fertilization program.

An afternoon's catch. Young Friday keeps an accurate record of kinds, numbers and weights—indulges in no "tall tales."

LOUISIANA LOBLOLLIES.—A cutting of loblolly pine on an 8-acre plantation of the Sutton farm near Gibsland was significant in Louisiana agriculture for a number of reasons. It virtually marked the end in northwest Louisiana of the old, wasteful practice of wiping out a woodland in one cutting. It proved again the value of using the land for what it is able to produce best. And it showed how land properly used can benefit many people of an area.

It was the first time that a tree plantation was cut in the Saline Soil Conservation District which covers parts of Bienville, Claiborne, Webster, Red River, Natchitoches, and Winn Parishes.

When Fred F. Sutton and brothers bought the farm in 1929, the 8-acre hillside now forming the plantation had been in cultivation for 25 years, having been cleared of its virgin oak and pine. The Suttons continued to cultivate it to row crops until 1937. By then it had become so badly eroded and depleted that clean-tilled cultivation was no longer profitable. Then the Suttons turned to soil conservation as a means of saving their land and making the farm as productive as possible. Youths in a Soil Conservation Service CCC camp planted the 8 acres to loblolly pine.

Now erosion on the hillside has been controlled and the 8 acres are again productive. The first cutting produced six carloads of pulpwood that netted the Suttons $28 an acre. The timber stand is still intact and through natural reseeding and conservation management will be permanently productive.

"In negotiations for the sale of the pulpwood, no one ever mentioned a clean cut of the stand," J. C. Sutton said in emphasizing the new attitude of farmers and lumber mills toward woodland management. "We all took it for granted that the woodland would be cut on a selective basis. Besides, everyone knows better than to talk about a clean cut to me."

SCS technicians assisting the Saline Soil Conservation District showed the Suttons how to measure and mark the trees that should be cut. One acre, set aside as an observational plot to record tree growth, yielded 473 of its original planting of 1,113 trees, their diameters averaging 4.9 inches at breast height.

From an economic point of view, woodland management of this sort benefits not only the farmers but many other people and whole communities in the woodland area. All the money stays at home. The farmer benefits, the contractor who does the cutting job benefits, and so does the local mill that turns the wood into paper products. Railroads share in the benefits by transporting the wood to the mills. All of this local activity produces employment for many people. For producing benefits that are reaped in your own locality, you can't beat a properly managed farm woodland.

The three Sutton brothers (Fred F., J. C., and E. W.) are carrying out a coordinated soil conservation program on their 1,700-acre farm. Other woodlands on the farm are managed on a sustained-yield basis like the 8-acre plantation. To use the whole farm for what it is best suited, the Suttons have turned from row-cropping to beef cattle and woodland production. Pastures and meadows produce grazing and feed crops.

—JIMMIE P. MAXWELL.

TOP TO BOTTOM.

Excellent stand remains after first cutting, hardly noticeable being the six carloads of pulpwood that have been removed.

Cutting a marked tree on the Sutton plantation.

Jimmie P. Maxwell measures diameter of pulpwood stacked in pens after first cutting.

Railroad car inspector checks carload of pulpwood from Sutton plantation.

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